



# Mathematics Course Outline

Autumn 2020 Competition

## Grade 2

Unit	In this paper, students may be required to do the following:
Numbers and Calculation	1. Understand how to perform addition and subtraction of numbers up to 10
	2. Recognise numbers up to 120
	3. Know how to do sums of 3 numbers
	4. Understand how to perform addition and subtraction of two- and three-digit numbers
Units and Measurement	1. Know how to read time on a clock face
	2. Understand the concept of length
Geometry	1. Recognise triangles and quadrilaterals

## Grade 3

Unit	In this paper, students may be required to do the following:
Numbers and Calculation	1. Recognise numbers up to 10,000
	2. Understand how to perform written sums of operations with carrying or borrowing
	3. Know products of multiplication by up to 9
	4. Understand how to solve problem sentences
	5. Understand how to perform written sums of operations between three-digit numbers
Units and Measurement	1. Know how to read time on a clock face
	2. Understand the concept of length
	3. Understand the relationship between units of length
Geometry	1. Recognise triangles and quadrilaterals

## Grade 4

Unit	In this paper, students may be required to do the above and the following:
Numbers and Calculation	1. Understand how to perform written sums of multiplication
	2. Understand the concept of division with and without remainder
	3. Recognise numbers up to 100,000,000
	4. Understand how to perform working sum of division
Units and Measurement	1. Understand the difference between time and period
	2. Understand the concepts of mass and volume
	3. Understand the relationship between different units of mass and volume
	4. Know how to interpret readings on measurement apparatus
Geometry	1. Recognise triangles and quadrilaterals with right angles
	2. Understand the characteristics of a cuboid
Basic Statistics	1. Know how to read and interpret tables and bar graphs

## Grade 5

Unit	In this paper, students may be required to do the above and the following:
Numbers and Calculation	1. Understand the order of calculation
	2. Understand how to round off numbers up to 100,000,000,000,000
	3. Understand the concept and calculation of decimal fractions
	4. Understand the concept and properties of numeric fractions
	5. Understand the relationship between integers and decimal fractions
Units and Measurement	1. Know how to measure angles
	2. Understand the relationship between various angles
Geometry	1. Recognise plane and compound figures, circles, and spheres
Basic Statistics	2. Understand how to calculate areas of plane and compound figures
	1. Understand how to process data by tabulation
	2. Know how to read and interpret line graphs

## Grade 6

Unit	In this paper, students may be required to do the above and the following:
Numbers and Calculation	2. Understand how to perform multiplication and division of decimal fractions
	3. Understand how to perform addition and subtraction of numeric fractions
	4. Understand the application of commutative, associative, and distributive laws
	5. Understand the relationship between multiples and divisor of integers
	1. Know how to investigate perpendicularity and parallelity between two lines
Geometry	2. Recognise special kinds of quadrilateral
	3. Understand how to calculate areas of triangle, parallelogram, trapezoid, and rhombus
	4. Recognise circles and their elements
	5. Understand how to calculate circumference and area of a circle
Basic Statistics	1. Understand the concept of percentage
	2. Know how to read and interpret circle and column graphs